

Lakeshore Road (Nevada State Route 166)  
Boulder Basin, Lake Mead National Recreation Area  
Boulder City Vicinity  
Clark County  
Nevada

HAER No. NV-22

HAER  
NEV  
2-BOUC.V,  
1-

**PHOTOGRAPHS**

**WRITTEN HISTORICAL AND DESCRIPTIVE DATA**

Historic American Engineering Record  
National Park Service  
Department of the Interior  
San Francisco, California

HISTORIC AMERICAN ENGINEERING RECORD  
LAKESHORE ROAD (Nevada State Route 166)

HAER  
NEV  
2-BOUC.V,  
1-

HAER No. NV-22

**Location:** Lakeshore Road/State Route 166  
3 miles north of Boulder City/4 miles northeast of Henderson  
Lake Mead National Recreation Area (NRA), Clark County,  
Nevada  
  
U.S.G.S. 7.5 minute Boulder Beach, Nevada-Arizona and  
Henderson, Nevada quadrangles  
Universal Transverse Mercator coordinates: Zone 11  
698800 mE 39870000 mN (southeast end)  
691200 mE 3998050 mN (northern most point)  
688850 mE 3997000 mN (northwest end)

**Date of Construction:** 1941-1943

**Engineer:** Unknown

**Builder:** National Park Service/A. Teichert and Son, Sacramento, California

**Present Owner:** National Park Service

**Present Use:** Lake Mead NRA Access Road/State Route.

**Significance:** Lakeshore Road and associated road features have been  
determined locally significant under National Register Criteria A  
and C. Construction of the road opened Lake Mead NRA, an  
early and major southwestern recreational area, to development  
and tourism. Construction of the road and associated features  
reflect building techniques employed in southern Nevada during  
the 1940's, as well as construction modifications necessitated by  
defense buildup prior to World War II. While the road itself has  
been extensively modified through time, its alignment and  
associated features (headwalls, culverts, gutters) retain good to  
excellent integrity.

**Report Prepared By:** Leslie Peterson, Cultural Resource Specialist  
Steven E. Daron, Staff Archeologist  
Lake Mead National Recreation Area  
National Park Service  
601 Nevada Highway  
Boulder City, Nevada 89005

**Date:** August 1996

## I. DESCRIPTION

Lakeshore Road (site 26CK5383) is a two-lane, paved highway that parallels the southwestern shoreline of Lake Mead's Boulder Basin. The northwest end of the road lies approximately 4 miles east of Henderson, Nevada, and 2.75 miles west of Las Vegas Bay on Lake Mead (Figure 1). The southeast end intersects with U.S. Highway 93 at Lake Mead NRA's Alan Bible Visitor Center approximately 3.5 miles east of Hoover Dam. The road consists of 12.4 miles of paved surface punctuated by water-diversion features such as culverts, gutters, and water overflows located at key drainages (Figure 2; Table 1). These features were designed to accommodate occasional, but dramatic, flash floods associated with the rugged desert terrain.

A 5.7-mile section of the road running from the NRA's visitor center to 0.4 miles south of the Nevada State Fish Hatchery has been reconstructed. Improvements to the road include realignment, widening, and reterraining the grade. All water diversion features have been modified or replaced. This portion of the road is not included in this documentation.

The remainder of the road retains the road's original alignment and 52 water diversion features. A 3.1-mile segment running from NRA's boundary 4 miles east of Henderson, Nevada, to Las Vegas Bay is scheduled for reconstruction in the fall of 1996. The road's basic alignment will be retained, but all water diversion features will be replaced.

A final, "middle" 4.3-mile segment extending approximately from the Las Vegas Bay to the State Fish Hatchery will be abandoned and a new road alignment constructed closer to the lake's shoreline. Both the extant road and most water diversion features will be retained *in situ* along this segment.

Reconstruction of Lakeshore Road will permit the road to continue its historic use as a major transportation corridor to Lake Mead and Hoover Dam.

## II. HISTORICAL INFORMATION

The completion of Hoover Dam (1936) and inundation of Lake Mead (1941) mark two premier Pre-World War II engineering feats. Combined, these engineering accomplishments led to the country's first national recreation area. Where once there had been desert and an uncontrolled river, there was now over 500 miles of scenic shorelines and vast recreational opportunities. Between 1936 and 1964, the area was jointly administered by the Bureau of Reclamation and National Park Service. In 1964, much of this area was added to the National Park System as Lake Mead NRA. Today, this recreational oasis is visited annually by 10 million visitors from across the United States and from most major foreign countries. Construction of Lakeshore Road in the 1940's was instrumental in opening this important recreation area to tourism and development (Las Vegas Evening Review Journal 1935a and 1935b).

Lakeshore Road was constructed as part of the "rim of the lake highway" project. Originally the

"rim of the lake highway" project ran from Boulder City along the south and west side of Lake Mead to Overton, Nevada, at the lake's extreme northern end. A branch of the road also ran west to Boulder Highway/U.S. 93 in Henderson, Nevada (Las Vegas Evening Review Journal 1935a). Documentation in this report pertains only to the portions of the road extending from the Nevada State Fish Hatchery to the NRA's boundary east of Henderson (see Figure 1, Phases 2 and 3).

Construction began in 1935 (Las Vegas Evening Review Journal 1935a and 1935b). A contract to build and pave a segment from Hemenway Wash to Las Vegas Bay was awarded in February 1941 to A. Teichert and Son of Sacramento, California (Boulder City News 1941a and 1941b). Work on this portion of the road began in February 1941 and was completed in October 1941 (Boulder City News 1941b, Las Vegas Evening Review Journal 1941).

Road construction was complicated by the rugged drainage patterns typical of the area. Two solutions were developed to overcome the drainage problems (Whittle 1942). In the broad, shallow drainages with poorly defined channels where culverts were impractical, overflow sections or dips were constructed in the road. In the drainages where channels were better defined corrugated culverts from 18 to 48 inches in diameter were used for the smaller drainages. Sectional or multiplate pipes from 75 to 180 inches in diameter were constructed in the larger washes (Whittle 1942: 198). Whittle indicates that instead of using concrete headwalls on the multiplate culverts, "the ends [of the culverts] were beveled and mitered at the shop to fit the slopes of the roadway fills, and the fills were then faced with rock riprap 2 [feet] thick. An apron of this riprap encased in wire mesh was used at the outlets of the pipes to prevent scour" (Whittle 1942: 198). He also indicates that concrete was to be used to construct the headwalls on the 18 to 48-inch culverts, but "a shortage of aggregates from local commercial plants due to several nearby defense projects made it necessary to change to cement stone masonry" (Whittle 1942: 198). The culverts in question were located between Hemenway Wash and the Las Vegas Bay.

The western branch of the "rim of the lake highway" running from Henderson to Las Vegas Bay was surveyed and probably graded in the mid to late-1930s (Las Vegas Evening Review Journal 1935a). Articles in the Las Vegas Evening Review Journal (1942, 1943) affirm there was a road running from Boulder Highway to the Three Kids Mine and on to Las Vegas Bay. The road was paved as far as the Three Kids Mine in 1942 and early 1943. The articles also discuss plans to pave the portion of road from the mine to Las Vegas Bay, however, exact dates for the construction and paving of this section of road have not been located.

To summarize, the Lakeshore Road was part of the original "rim of the lake highway" project surveyed in the mid to late-1930s. The section of Lakeshore Road running from the State Fish Hatchery to Las Vegas Bay was constructed and paved in 1941. The section of Lakeshore Road running from Las Vegas Bay to the park boundary west of Las Vegas Bay was surveyed and in use as a dirt road by 1942. It was improved and paved sometime after early 1943.

### III. ARCHITECTURAL AND ENGINEERING INFORMATION

Architectural and engineering components of Lakeshore Road consist of the road's alignment and associated water diversion features (Note: Due to repeated episodes of paving and repair, the road's original grade no longer is intact and is omitted from documentation). The road's alignment is shown in Figure 1 and accompanying photographs. Water diversion features contained up to five distinct elements: upstream headwalls, culverts, downstream headwalls, aprons, and gutters. Additional documentation of these features can be found in the Field Records associated with this HAER report.

**UPSTREAM HEADWALLS:** An upstream headwall is defined here as any stone, masonry, or cement structure located at the upstream end of a culvert.

Construction Method - Four construction methods were identified. The first type is cement and stone. In this type of headwall the majority of the rocks are unaltered; that is, they have not been cut or dressed to create flat surfaces and square edges. Because the rocks have not been dressed, they do not line up in even, parallel, horizontal rows. Instead, the masonry forms a random pattern on the front or face of the headwalls. Twelve of these construction types were located and are identified as Features LSR 1 through LSR 12 (see Table 1). They are located along the section of Lakeshore Road from the park boundary east of Henderson, Nevada, to Las Vegas Bay, and are associated with the section of Lakeshore Road constructed after early 1943.

The second type of construction method is dressed stone. The stones in these headwalls have been cut or worked to form large rectangular blocks and to fit the end of the culverts. The rectangular blocks are stacked like bricks to form the headwalls. A total of 27 of this type of upstream headwall was located and are identified as Features LSR 14 through LSR 17, LSR 19 and LSR 20, LSR 24 through LSR 29, LSR 31 and LSR 32, LSR 35, LSR 37 and LSR 38, LSR 41 and LSR 42, LSR 44 and LSR 45, LSR 47 through LSR 50, and LSR 52. They are located along the section of Lakeshore Road that runs from Las Vegas Bay to the State Fish Hatchery, and are associated with the section of Lakeshore Road constructed in 1941.

The third type of construction method is riprap. Stones are placed on the sloping surface of the road fill covering a large rectangular area around the end of the culverts. Whittle (1942: 198) indicates that the rock riprap was two feet thick. Ten of this type of upstream headwall were located (Features LSR 13, LSR 18, LSR 21, LSR 30, LSR 33 and LSR 34, LSR 40, LSR 43, LSR 46, and LSR 51). They also are located along the section of Lakeshore Road that runs from Las Vegas Bay to the State Fish Hatchery, and are associated with the section of Lakeshore Road constructed in 1941.

The fourth type of construction method is a cement box with a metal grate. The cement box is at the end of the culvert. The metal grate forms the top of the box and is flush with the ground surface. Two of this type of upstream headwall were located (Features LSR 23 and LSR 39). They are located along the section of Lakeshore Road constructed in 1941. Whittle (1942) does not discuss this type of construction method, suggesting that these two features may have been

altered from their original form or were a later addition. The rock used in the construction of all the features is of volcanic origin and is locally available. The majority of the rock used is dacite and andacite, with a few basalts and volcanic tuffs also used.

Style - Four styles of upstream headwalls were identified during this project. The first style is vertical flat-faced. It consists of a vertical wall with a flat side or face at the end of a culvert. This style is on all of the cement and stone headwalls, Features LSR 1 through LSR 12, and on LSR 17 of the dressed stone headwalls and most of the dressed stone headwalls.

The second style is vertical winged and is associated only with the dressed stone headwalls. It consists of a vertical wall at the end of a culvert with a short wall or wing extending into the drainage from the vertical wall on each side of the culvert. This style is on ten headwalls, Features LSR 14, LSR 19, LSR 26, LSR 29, LSR 32, LSR 38, LSR 41, LSR 47, LSR 48, and LSR 50 (Table 1).

The third and fourth styles are riprap and cement with metal grate. They are associated with the construction method of the same name.

Condition - The condition of each upstream headwall was evaluated based on structural integrity. A four tier system was used with 90 percent to 100 percent being "excellent," 50 percent to 90 percent being "good," 25 percent to 50 percent being "fair," and less than 25 percent being "poor." A fifth category, "unknown," was used for headwalls partially buried with sediment.

All of the cement and stone, dressed stone, and cement with metal grate upstream headwalls are in excellent condition. The condition of the riprap upstream headwalls varies. Five are in excellent condition and include those associated with Features LSR 18, LSR 34, LSR 40, LSR 43, and LSR 51. The riprap upstream headwalls associated with Features LSR 13 and LSR 33 are in good condition. The south end of each of these headwalls is being undercut by erosion and is collapsing. The riprap upstream headwall associated with Feature LSR 30 is in fair condition. Feature LSR 30 has two large culverts, and the section of headwall on the upstream side between the two culverts is being cut away by erosion. The riprap upstream headwalls associated with Features LSR 21 and LSR 46 are partially buried and their condition is unknown.

**CULVERTS:** All culverts are round. The type of construction material, diameter, and condition of each culvert were recorded. Three types of culverts were identified during this project: cement, corrugated metal, and multiplate.

A total of 12 cement culverts were located. They are associated with the cement and stone headwalls at Features LSR 1 through LSR 12. These features are located along the section of Lakeshore Road from the park boundary to Las Vegas Bay, and are associated with the section of Lakeshore Road constructed after early 1943. The cement culverts range in diameter from 18 to 32 inches.

A total of 29 corrugated metal culverts were located. They are associated with Features LSR 14 through LSR 17, LSR 19 and LSR 20, LSR 22 through LSR 29, LSR 31 and LSR 32, LSR 35,

LSR 37 through LSR 39, LSR 41 and LSR 42, LSR 44 and LSR 45, LSR 47 through LSR 50, and LSR 52. Two of these culverts are associated with the cement box with metal grate headwalls and 26 are associated with the dressed stone headwalls. The upstream end of the culvert associated with Feature LSR 22 has been plugged and buried and does not have a headwall. These features are located along the section of Lakeshore Road constructed in 1941. The corrugated metal culverts range in diameter from 18 to 48 inches.

A multiplate culvert is made from a series of corrugated metal plates 52 inches wide. The plates are curved so that when they bolted together they form a round culvert. A total of 12 multiplate culverts were located. Features LSR 13, LSR 18, LSR 21, LSR 33, LSR 34, LSR 40, LSR 43, and LSR 46 each have one multiplate culvert, and Features LSR 30 and LSR 51 each have two multiplate culverts. These features are located along the section of Lakeshore Road constructed in 1941. Multiplate culverts are used only with riprap style headwalls. The number of metal plates used to construct the culverts varies from 5 to 12 creating culverts with diameters ranging from 6.25 feet to 16 feet. Whittle (1942: 198) indicates that the ends of these culverts were "beveled and mitered at the shop to fit the roadway fills."

Two corrugated metal drain pipes, 12 inches in diameter, also were located. They are associated with Features LSR 14 and LSR 48. The drain pipe associated with Feature LSR 14 runs from the end of the gutter in Position B to a hole on the south wing of the upstream headwall (see below for discussion on gutter position). The drain pipe associated with Feature 48 runs from the small headwall at the edge of the road identified as LSR 48a to the north wing of the upstream headwall.

The same five condition categories were used for culverts as were used for upstream headwalls. All culverts are in excellent condition except for three, which are associated with Features LSR 3, LSR 21 and LSR 22. The culvert associated with Feature LSR 3 is in good condition, the downstream end of this culvert was damaged at some point and was repaired with a piece of corrugated metal culvert. The condition of the culverts associated with Features LSR 21 and LSR 22 could not be determined. The upstream end of the culvert associated with Feature LSR 21 is buried, and a new corrugated metal culvert was put inside the original multiplate culvert. The new culvert is dated 10/27/83. The culvert associated with Feature LSR 22 is completely buried on its upstream end and is half full of sediment at its downstream end.

**DOWNSTREAM HEADWALLS:** For this report, a downstream headwall is defined as any stone, masonry, or cement structure located at the downstream end of a culvert.

Construction Method - Three types of construction method were identified during this project. The three types are cement and stone, dressed stone, and riprap. These are the same construction methods defined above under Upstream Headwalls. Two cement and stone downstream headwalls were located. They are associated with Features LSR 6 and LSR 8. One dressed stone downstream headwall was located. It is associated with Feature LSR 24.

Ten riprap downstream headwalls were located. They are associated with the same features which have riprap upstream headwalls, and include Features LSR 13, LSR 18, LSR 21, LSR 30, LSR 33 and LSR 34, LSR 40, LSR 43, LSR 46, and LSR 51.

Condition - All of the downstream headwalls are in excellent condition except for the downstream headwall associated with Feature LSR 46. This downstream headwall is classified as being in good condition because it is partially buried by sediment.

**APRON:** An apron is a device at the base of some of the downstream headwalls designed to prevent erosion at the downstream end of the culverts. Three types of aprons were identified. The first type is similar to the gutters described below, and consists of flat rocks in a cement matrix. Only one of this type is present, and it is associated with Feature LSR 24.

The second type consists of large rocks wrapped in heavy gage wire mesh. This type of apron is associated with Features LSR 18, LSR 33, LSR 40, LSR 46, and LSR 51. Feature LSR 34 has a variation of this type of apron. It consists of a low ridge, 28 feet long, constructed from large rocks and covered in wire mesh. The ridge is parallel to the road and is located approximately 40 feet east of the downstream end of the culvert.

The third type consists of cement. The cement lines the bottom 3 to 4 feet of the drainage walls but not the flat sandy bottom of the drainage. This type of apron is associated with only one feature, LSR 13, and could be a recent addition.

All aprons are associated with features located along the section of Lakeshore Road constructed in 1941. The rock and wire mesh aprons and the cement apron are only associated with riprap headwalls. The stone and cement apron is associated with a dressed stone downstream headwall.

Condition: LSR 13 apron is in excellent condition, LSR 24, 33, 40, 46, and 51 are fair condition, and LSR 11 is in poor condition.

**GUTTERS:** Gutters are shallow, paved drainage ditches at the edge of drainages. The gutters are designed to carry water run-off from the road cuts to the drainages to prevent the road fill in the drainages from eroding. Gutters are classified based on their position and construction material. The total length and condition of each gutter was also recorded.

Gutter Position - Four positions (A, B, C, and D) were defined based on the location of the gutter in relationship to the drainage and the road. When standing in the drainage on the upstream side facing the road, position A is on the left and position B is on the right. When standing in the drainage on the downstream side facing the road, position C is on the left and position D is on the right.

Two types of construction material were identified: cement, and stone and cement. Cement gutters are crudely constructed, and appear to be added after the road was constructed. The cement gutters are associated with Features LSR 7 and LSR 8, and are in poor and excellent condition, respectively. These features are located along the section of Lakeshore Road from the



park boundary to Las Vegas Bay, and are associated with the section of Lakeshore Road constructed after early 1943.

The stone and cement gutters are very well constructed and consist of flat stones set in cement. The gutters consistently average approximately two feet in width and form a shallow "V" in cross section. The consistent width and squared off sides give the impression that they were constructed using a form or mold. Conditions vary widely (see table 1). These features were built during the 1941 construction phase.

#### IV. SIGNIFICANCE

The portions of Lakeshore Road (Site 26CK5383) extending from the NRA boundary east of Henderson to the State Fish Hatchery and has been determined locally eligible to the National Register of Historic Places under Criteria A and C.

The site is eligible under Criterion A because of its association with two events. The first event is the opening up of the shore of Lake Mead on the west side of the Boulder Basin to development and tourism. Historic documents (Boulder City News 1941a, Las Vegas Evening Review Journal 1935a, 1935b, 1941, and 1942, Whittle 1942) indicate that construction of the Lakeshore Road opened up the Las Vegas Wash (now Las Vegas Bay) and made "accessible for fishing, boating, and recreation the shores of the largest man-made lake in the world" (Whittle 1942: 196).

The second event is the defense buildup prior to World War II. Whittle (1942) indicates that the construction of the headwalls had to be altered because of a shortage of construction materials stemming from the buildup:

The only concrete specified in the contract was some 70 [cubic yards] in the headwalls of the 18 to 40-[inch] pipe culverts. However, a shortage of aggregates from local commercial plants due to several nearby defense projects made it necessary to change to cement stone masonry. (Whittle 1942: 198).

This event under Criterion A applies to the section of Lakeshore Road constructed in 1941, specifically to the headwalls associated with Features LSR 13 through LSR 52. Because Features LSR 1 through LSR 12 are located along the section of Lakeshore Road which was constructed after 1942, they do not contribute to the National Register status of the road under Criterion A.

Lakeshore Road is eligible under Criterion C because of the vernacular nature of the features and because of the engineering problems associated with building a road in a desert environment. The vernacular element of Criteria C applies to all of the features located along the section of Lakeshore Road from the park boundary east of Henderson, Nevada, to the State Fish Hatchery, specifically to Features LSR 13 through LSR 52. Historic documentation is lacking for some of these features, however, they are all vernacular in style and represent the construction methods used during the early to mid-1940s. Whittle (1942) describes the engineering problems and the

way in which the road, culverts, and headwalls were designed and fabricated to overcome these problems.

## V. SOURCES

### Boulder City News

"Scenic Road Bids in Now." Tuesday, January 28, 1941, Vol. 4, No. 19, Boulder City, Nevada, 1941a. "Scenic Road Project Starts." Tuesday, February 18, 1941, Vol. 4, No. 34, Boulder City, Nevada. 1914b.

D'Ascenzo, Lynne. Archeological Survey of Proposed Realignment, Lakeshore Road, Lake Mead National Recreation Area, Nevada. WACC project number LAME 1990 A. On file, Western Archeological and Conservation Center, National Park Service, Tucson, Arizona, 1991.

Ervin, Richard G. Lake Mead Developed Area Surveys: The LAME 86A Archeological Investigations and Related Projects, Lake Mead National Recreation Area, Nevada and Arizona. Publications in Anthropology No. 41. Western Archeological and Conservation Center, National Park Service, Tucson, Arizona, 1986.

### Las Vegas Evening Review Journal

"Survey Party is Established at Midway to Begin Project." August 13, 1935, Vol. 27, No 191, Las Vegas, Nevada, 1935a.

"CCC Boys to Start Lake Rim Highway." November 9, 1935, Vol. 27, No 266, Las Vegas, Nevada, 1935b.

"New Oiled Road Around Lake is Scenic Arterial." October 11, 1941, Vol. 33, No 242, Las Vegas, Nevada, 1941.

"Three Kids Mine Road is Started." June 11, 1942, Vol. 34, No 138, Las Vegas, Nevada, 1942.

"4 Road Projects Being Studied in Las Vegas Area." March 26, 1942, Vol. 35, No 72, Las Vegas, Nevada, 1943.

National Register Bulletin # 15. How To Apply The National Register Criteria For Evaluation. Interagency Resources Division, National Park Service, U.S. Department of the Interior, Washington D. C., Revised 1991.

Teague, George A. Trip Report, Lake Mead, Survey of Portions of the Lakeshore Road. Western Archeological and Conservation Center project number LAME 1992 D. On file, Cultural Resources Office, Lake Mead NRA, Boulder City, Nevada, 1992.

Wells, Susan J. Archeological Summary for Proposed Reconstruction of Lakeshore Road (Pkg. 242), Lake Mead National Recreation Area, Nevada. On file, Western Archeological and Conservation Center, National Park Service, Tucson, Arizona, 1991.

Whittle, George D. "Drainage Problems on New Lake Mead Road: Unusual Conditions Overcome in Construction of Scenic Route on Nevada Side of the Lake." Civil Engineering, April 1942. Vol 12, No 4, 1942.

## VI PROJECT INFORMATION

This documentation has been prepared by Lake Mead NRA-National Parks Service, which is proposing to reconstruct Lakeshore Road (Site 26CK5383). Reconstruction will entail widening, regrading, recontouring, and paving significant portions of the road. These actions will demolish many extant historic water diversion features. A 4.3-mile portion of the road will be realigned east and north of the current road. The road and features in this segment will remain in place. The extant portion of the road is being considered as a possible hiking and biking trail for park visitors, which will afford additional protection of the historic water diversion features along this segment.

Project Manager for this recordation was Lake Mead NRA Cultural Resource Specialist Leslie Peterson. Field Recordation and archival research was carried out by Staff Archeologist Steven E. Daron. HAER photography was conducted by Bureau of Reclamation Staff Photographer Andy Pernick through an inter-agency agreement with the Bureau's Lower Colorado Regional Office.

Figure 1. Lakeshore Road Reconstruction Phases

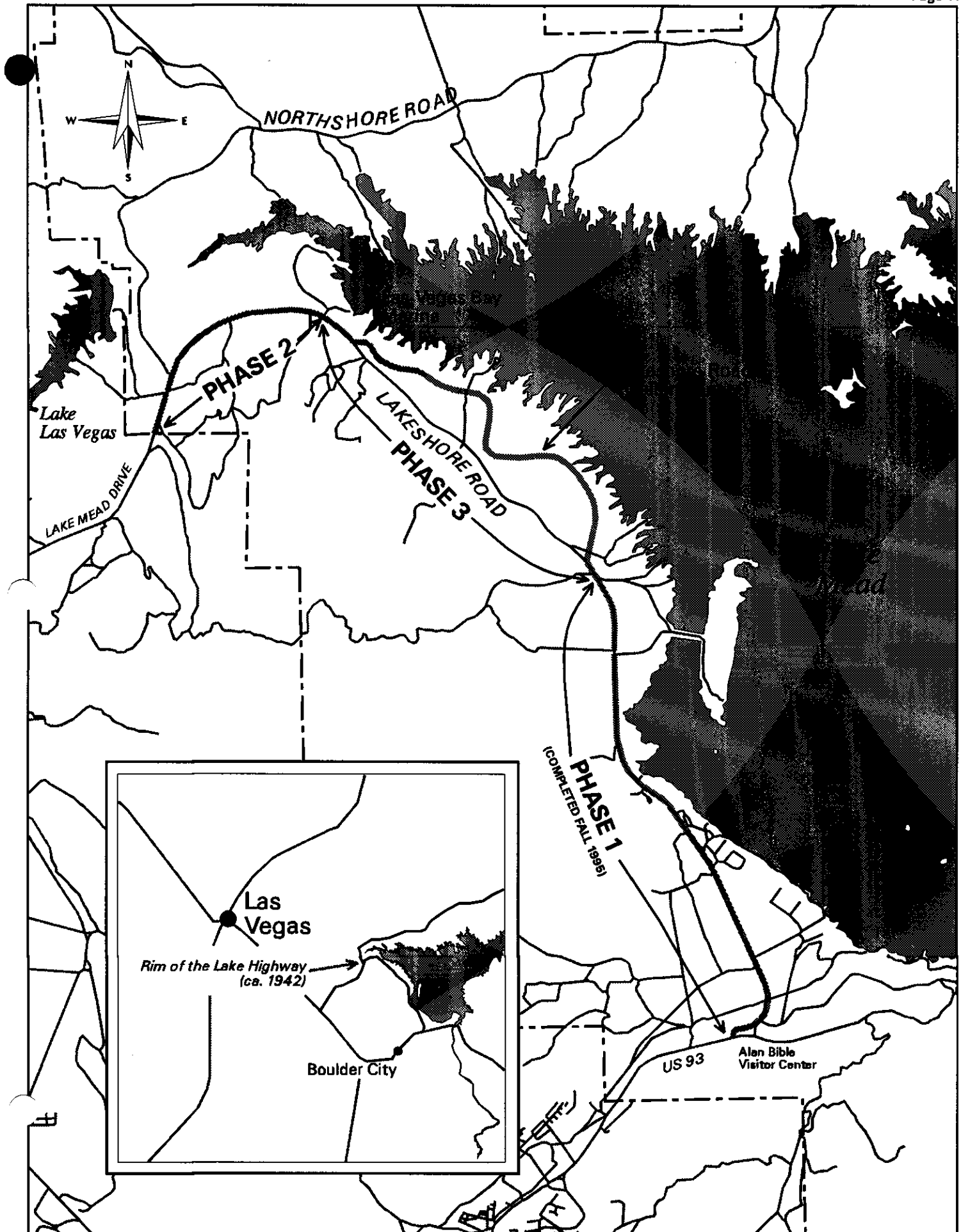


Figure 2. Location of Features LSR 1 through LSR 29

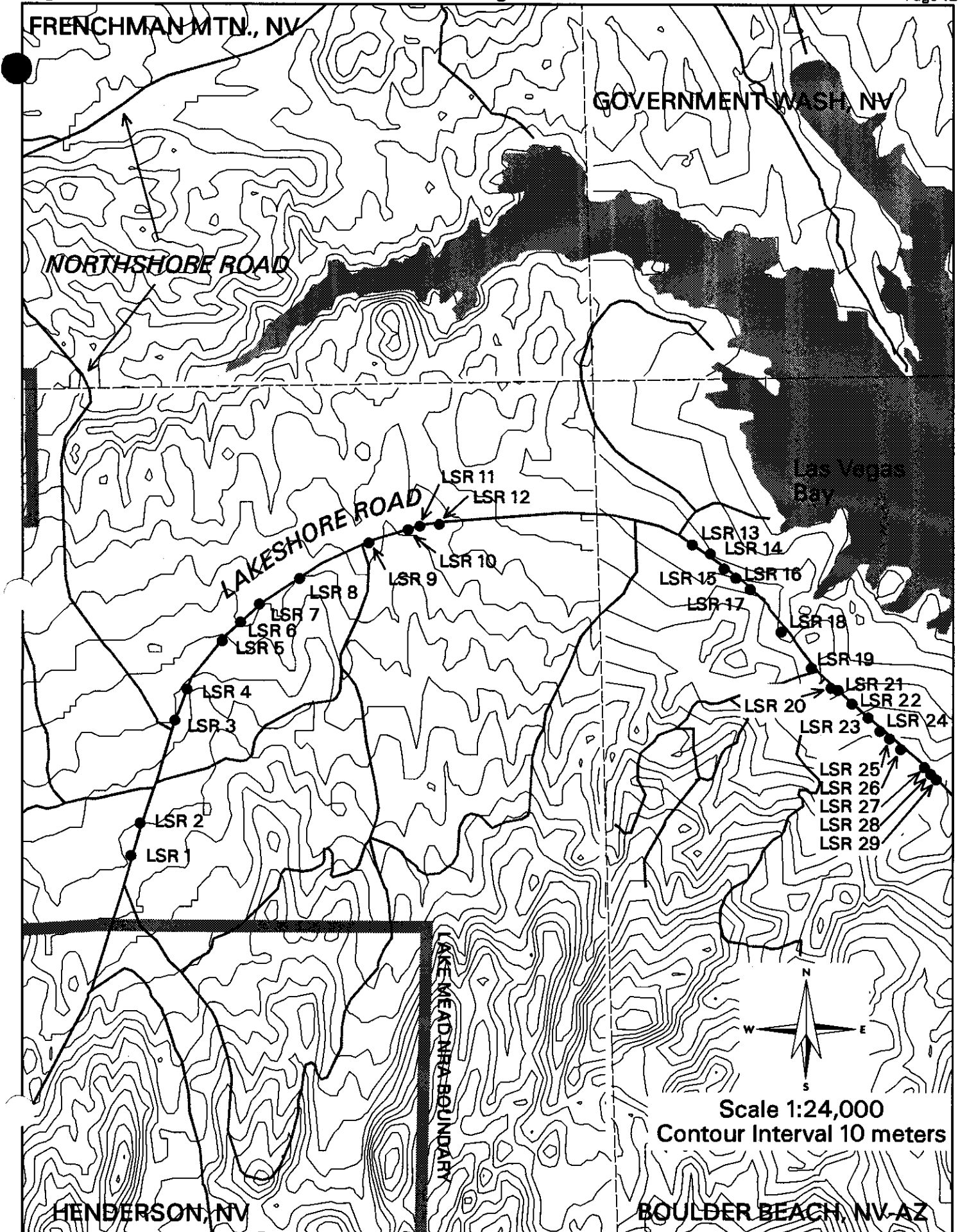


Figure 3. Location of Features LSR 19 through LSR 52

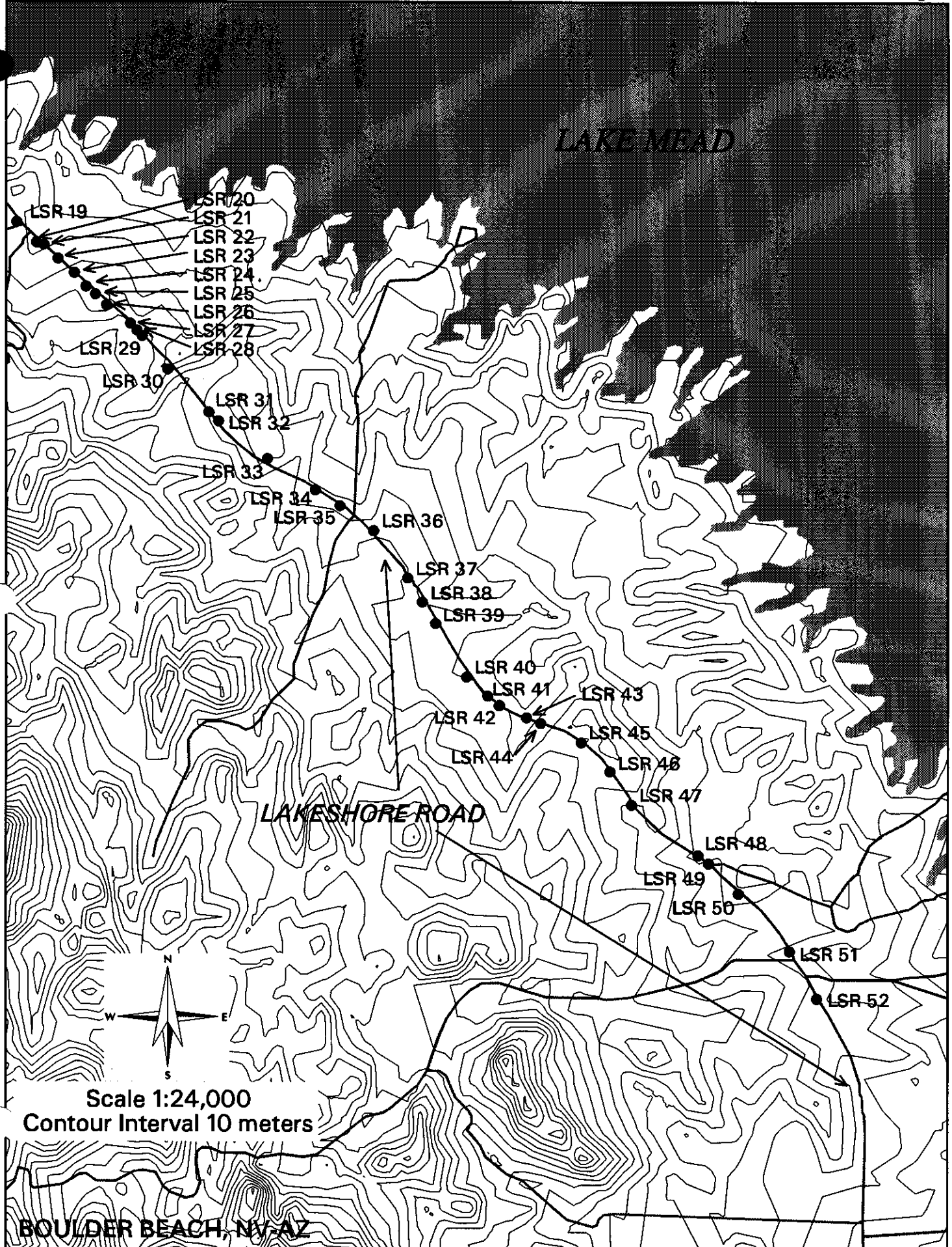


Table 1, Site 26CK5383  
Features and Associated Elements

F #	UTM	Upstream Headwall			Culvert	Downstream Headwall			Gutter Present/Con			
		CM	Style	Con		CM	Con	Apr	A	B	C	D
LSR 1	688951 mE 3997330 mN	CS	VF	E	Cmt 28"							
LSR 2	688996 mE 3997490 mN	CS	VF	E	Cmt 20"							
LSR 3	689167 mE 3998002 mN	CS	VF	E	Cmt/CoM 26"							
LSR 4	689227 mE 3998157 mN	CS	VF	E	Cmt 20"							
LSR 5	689401 mE 3998397 mN	CS	VF	E	Cmt 26"							
LSR 6	689491 mE 3998492 mN	CS	VF	E	Cmt 24"	CS	E					
LSR 7	689584 mE 3998582 mN	CS	VF	E	Cmt 32"					p		
LSR 8	689782 mE 3998709 mN	CS	VF	E	Cmt 18"	CS	E		e			
LSR 9	690124 mE 3998887 mN	CS	VF	E	Cmt 20"							
LSR 10	690318 mE 3998954 mN	CS	VF	E	Cmt 18"							
LSR 11	690376 mE 3998971 mN	CS	VF	E	Cmt 27"							
LSR 12	690472 mE 3998980 mN	CS	VF	E	Cmt 20"							
LSR 13	691713 mE 3998880 mN	RR	RR	G	Mp 16'	RR	E	Cm		E		
LSR 14	691801 mE 3998836 mN	DS	VW	E	CoM 36"					P	G	

Heading Abbreviations: F # = Feature Number, CM = Construction Method, Con = Condition, Apr = Apron  
Note: Under "Gutters Present/Con" lower case indicates a cement gutter, upper case indicates a stone and cement gutter.

Construction Method  
CS = Cement & Stone  
DS = Dressed Stone  
MG = Metal Grate  
RR = Riprap

Style  
MG = Metal Grate  
RR = Riprap  
VF = Vertical Flat-faced  
VW = Vertical Winged

Table Codes:  
Condition  
E = Excellent  
G = Good  
F = Fair  
P = Poor  
U = Unknown

Culvert  
Cmt = Cement  
CoM = Corrugated Metal  
Mp = Multiplate

Apron  
Cm = cement  
R/W = Rocks in  
wire mesh  
SC = Stone and  
cement

Table 1: Continued

F #	UTM	Upstream Headwall			Culvert	Downstream Headwall			Gutter Position/Con			
		CM	Style	Con		CM	Con	Apr	A	B	C	D
LSR 15	691868 mE 3998761 mN	DS	VF	E	CoM 24"					E	G	
LSR 16	691925 mE 3998715 mN	DS	VF	E	CoM 24"					G		
LSR 17	691995 mE 3998659 mN	DS	VF	E	CoM 24"					P		
LSR 18	692146 mE 3998446 mN	RR	RR	E	Mp 14'	RR	E	R/W	E	E	E	
LSR 19	692294 mE 3998267 mN	DS	VW	E	CoM 36"							
LSR 20	692391 mE 3998167 mN	DS	VF	E	CoM 18"				G		P	G
LSR 21	692426 mE 3998156 mN	RR	RR	U	Mp/CoM 7.5'/6'	RR	E				E	
LSR 22	692495 mE 3998088 mN				CoM 36"					F	E	
LSR 23	692575 mE 3998019 mN	MG	MG	E	CoM 24"					E	G	
LSR 24	692632 mE 3997953 mN	DS	VF	E	CoM 18"	DS	E	SC		E	E	
LSR 25	692678 mE 3997915 mN	DS	VF	E	CoM 24"					G	G	
LSR 26	692733 mE 3997862 mN	DS	VW	E	CoM 36"					E	E	
LSR 27	692849 mE 3997772 mN	DS	VF	E	CoM 18"							
LSR 28	692880 mE 3997739 mN	DS	VF	E	CoM 18"							
LSR 29	692906 mE 3997712 mN	DS	VW	E	CoM 28"					E	E	

Heading Abbreviations: F # = Feature Number, CM = Construction Method, Con = Condition, Apr = Apron

Note: Under "Gutters Present/Con" lower case indicates a cement gutter, upper case indicates a stone and cement gutter.

Construction Method  
CS = Cement & Stone  
DS = Dressed Stone  
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Style  
MG = Metal Grate  
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VF = Vertical Flat-faced  
VW = Vertical Winged

Table Codes:  
Condition  
E = Excellent  
G = Good  
F = Fair  
P = Poor  
U = Unknown

Culvert  
Cmt = Cement  
CoM = Corrugated Metal  
Mp = Multiplate

Apron  
Cm = cement  
R/W = Rocks in  
wire mesh  
SC = Stone and  
cement



Table 1: Continued

F #	UTM	Upstream Headwall			Culvert	Downstream Headwall			Gutter Position/Con			
		CM	Style	Con		CM	Con	Apr	A	B	C	D
LSR 30	693031 mE 3997548 mN	RR	RR	F	2 Mp 14'	RR	E			G	U	
LSR 31	693232 mE 3997338 mN	DS	VF	E	CoM 24"							
LSR 32	693279 mE 3997294 mN	DS	VW	E	CoM 42"				E			E
LSR 33	693518 mE 3997110 mN	RR	RR	G	Mp 6.25'	RR	E	R/W			E	E
LSR 34	693749 mE 3996956 mN	RR	RR	E	Mp 11'	RR	E	R/W				
LSR 35	693868 mE 3996879 mN	DS	VF	E	CoM 24"							
LSR 36	694030 mE 3996756 mN									E		
LSR 37	694196 mE 3996523 mN	DS	VF	E	CoM 24"				E	G		
LSR 38	694267 mE 3996405 mN	DS	VW	E	CoM 48"				E	E	G	
LSR 39	694332 mE 3996300 mN	MG	MG	E	CoM 18"					G	E	
LSR 40	694482 mE 3996037 mN	RR	RR	E	Mp 7.5'	RR	E	R/W	E		U	E
LSR 41	694587 mE 3995944 mN	DS	VW	E	CoM 36"							G
LSR 42	694642 mE 3995895 mN	DS	VF	E	CoM 24"						E	
LSR 43	694775 mE 3995837 mN	RR	RR	E	Mp 9'	RR	E			U	E	
LSR 44	694844 mE 3995810 mN	DS	VF	E	CoM 24"					E	U	

Heading Abbreviations: F # = Feature Number, CM = Construction Method, Con = Condition, Apr = Apron  
Note: Under "Gutters Present/Con" lower case indicates a cement gutter, upper case indicates a stone and cement gutter.

Construction Method  
CS = Cement & Stone  
DS = Dressed Stone  
MG = Metal Grate  
RR = Riprap

Style  
MG = Metal Grate  
RR = Riprap  
VF = Vertical Flat-faced  
VW = Vertical Winged

Table Codes:  
Condition  
E = Excellent  
G = Good  
F = Fair  
P = Poor  
U = Unknown

Culvert  
Cmt = Cement  
CoM = Corrugated Metal  
Mp = Multiplate

Apron  
Cm = cement  
R/W = Rocks in  
wire mesh  
SC = Stone and  
cement

Table 1: Continued

F #	UTM	Upstream Headwall			Culvert	Downstream Headwall			Gutter Position/Con			
		CM	Style	Con		CM	Con	Apt	A	B	C	D
LSR 45	695042 mE 3995715 mN	DS	VF	E	CoM 24"							
LSR 46	695181 mE 3995572 mN	RR	RR	U	Mp 6.25'	RR	G	R/W	P			
LSR 47	695285 mE 3995410 mN	DS	VW	E	CoM 36"				G			F
LSR 48	695605 mE 3995164 mN	DS	VW	E	CoM 48"				E			
LSR 48a		DS	VF	E	CoM 12"							
LSR 49	695656 mE 3995124 mN	DS	VF	E	CoM 24"				G			
LSR 50	695800 mE 3994978 mN	DS	VW	E	CoM 48"				F	E		G
LSR 51	696047 mE 3994698 mN	RR	RR	E	2 Mp 14'	RR	E	R/W		G		
LSR 52	696179 mE 3994468 mN	DS	VF	E	CoM 24"				E			E

Heading Abbreviations: F # = Feature Number, CM = Construction Method, Con = Condition, Apr = Apron

Note: Under "Gutters Present/Con" lower case indicates a cement gutter, upper case indicates a stone and cement gutter.

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